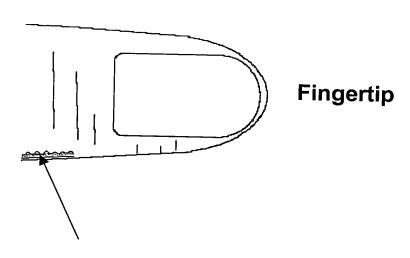
Sheet 1 of 19 Filed: HEREWITH
Title: Non-invasive measurement of analytes
Inventors: Workman and Lambert
Mintz, Levin, Cohn, Ferris, Glovsky and Popeo; Telephone: (617) 542-6000

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Reporter and Marker colors

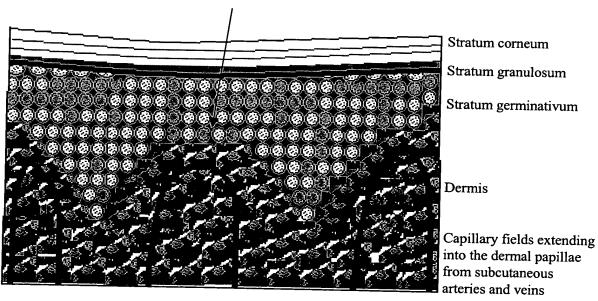
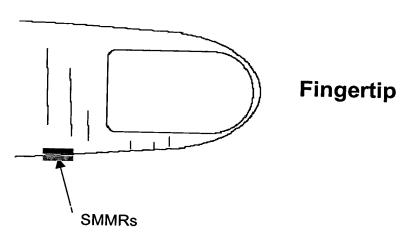


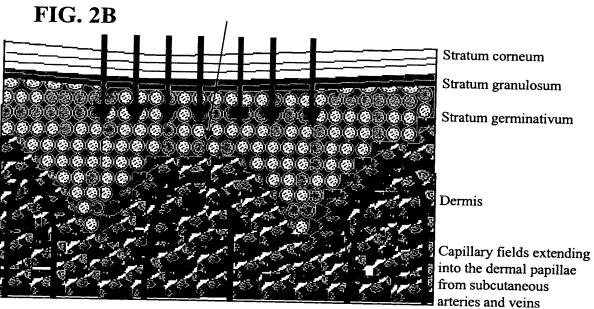
FIG. 1

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FIG. 2A

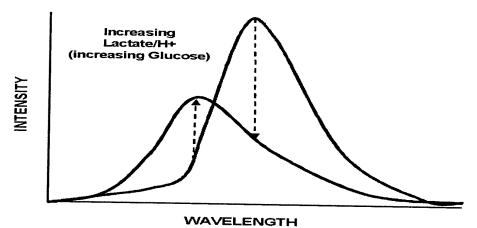


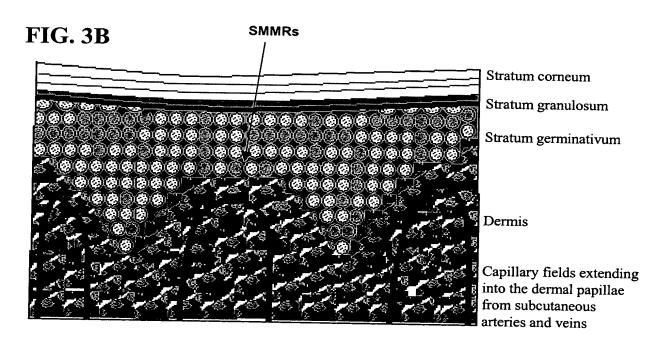


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FIG. 3A





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FIG. 4A

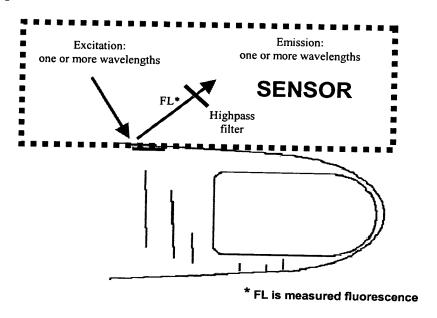
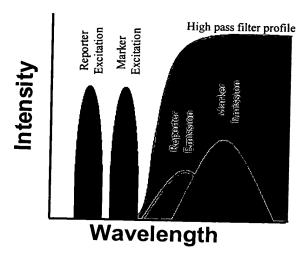


FIG. 4B



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FIG. 5A

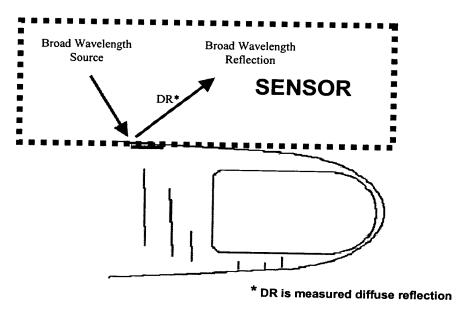
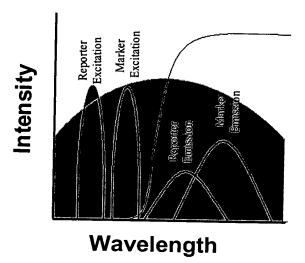


FIG. 5B



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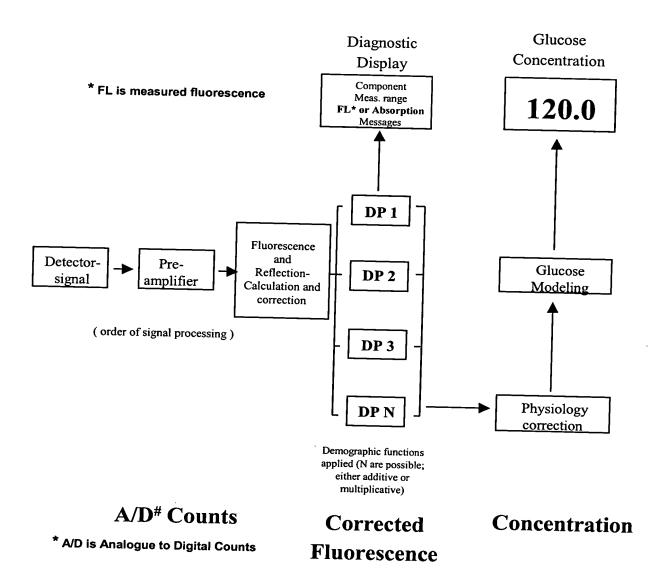


FIG. 6

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7/19 A/D-converter produces Sensor the counts for for Reporter, Marker, and Reflection signals * A/D is Analogue to Digital Counts counts Reporter counts Marker Demographic/Physiology functions applied to [G_C] $= [Glucose_C] = [G_C]$ (N types available) f(D) $[G_C]$ $[G_D]$ f(D) $[G_c]$ $[G_D]$ Correction of component signal Correction of component signal with 1 through N Demographic Functions f(D) with 1 through N Physiology resulting in [G_D] Functions f(P) resulting in [G_P] Final Corrected Blood Glucose [G_{BG}] **Blood Glucose** Concentration $[G_P]$ -[G_{BG}]output on display Model of $[G_P]$ versus $[G_{BG}]$

FIG. 7

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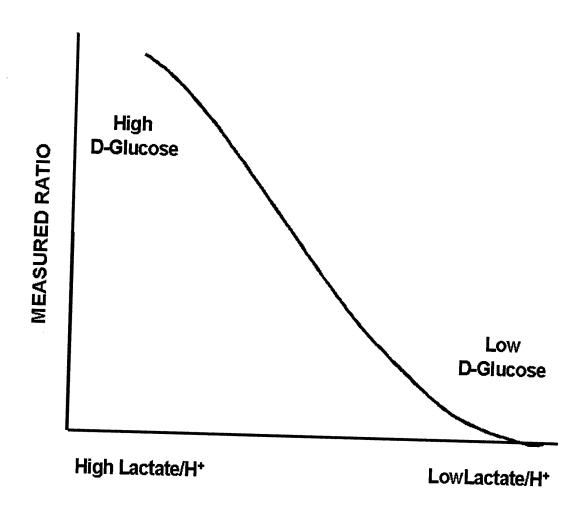


FIG. 8

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FIG. 9A

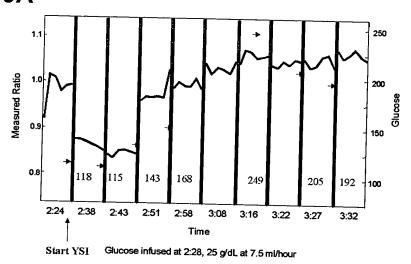
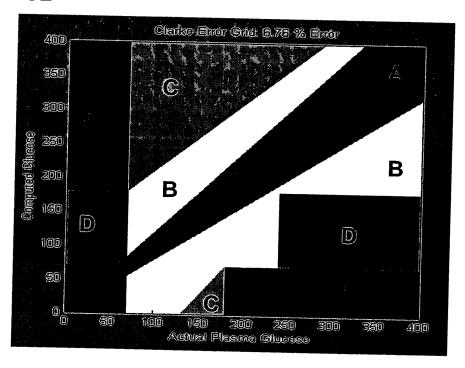


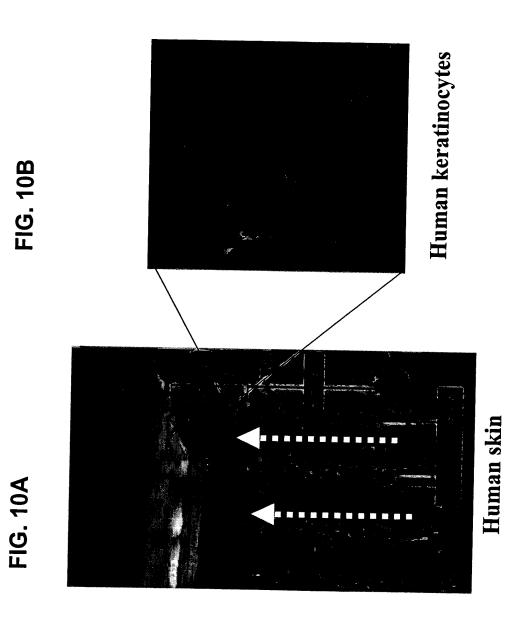
FIG. 9B



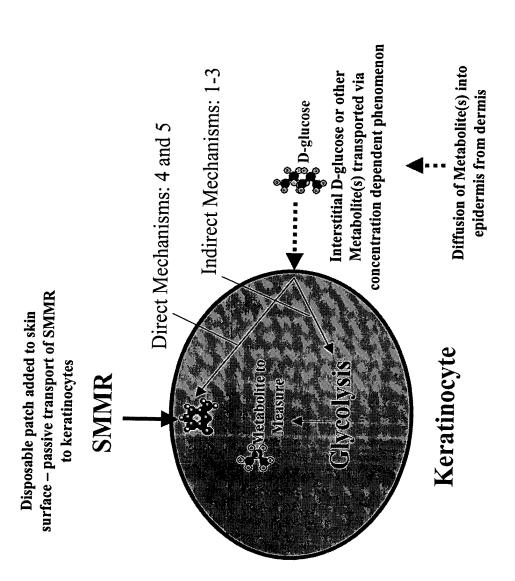
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Title: Non-invasive measurement of analytes
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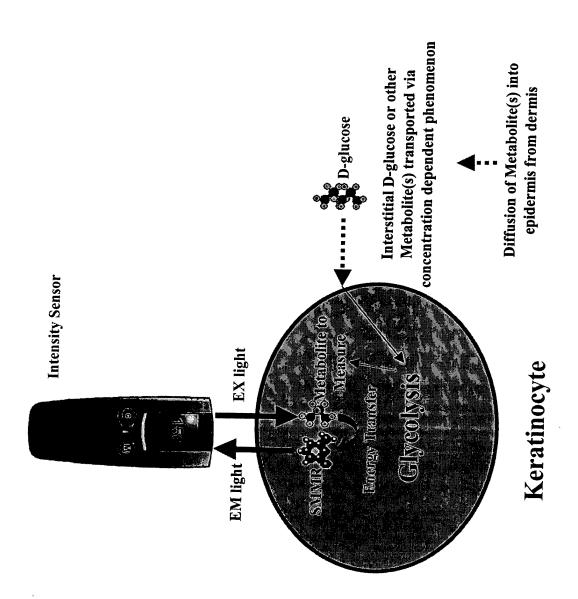
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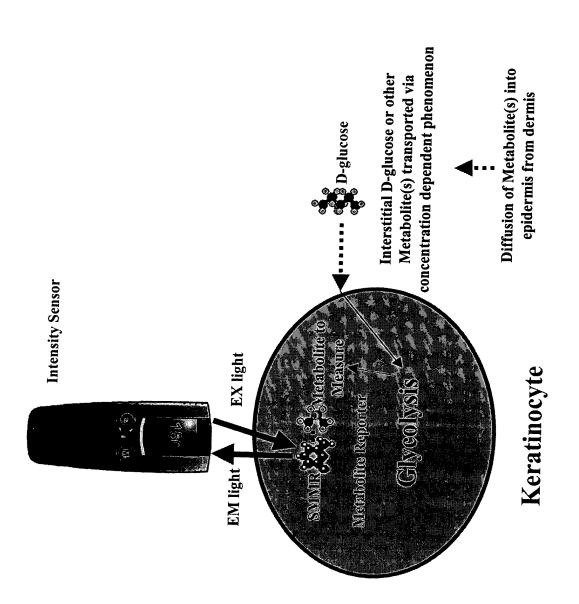
Sheet 11 of 19
Title: Non-invasive measurement of analytes
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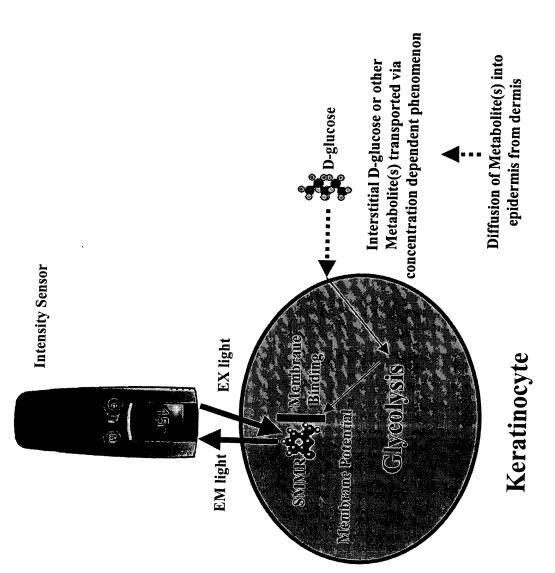
Sheet 12 of 19
Title: Non-invasive measurement of analytes
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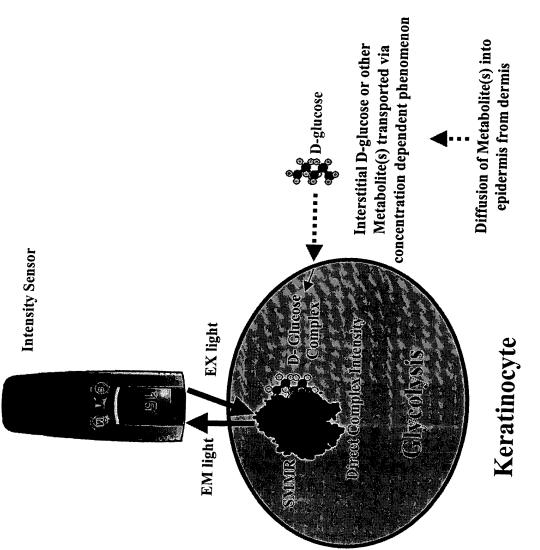
Sheet 13 of 19
Title: Non-invasive measurement of analytes
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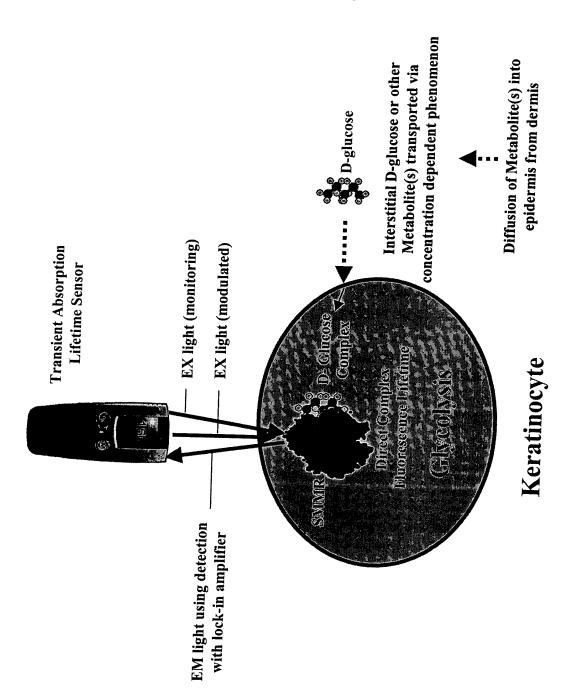
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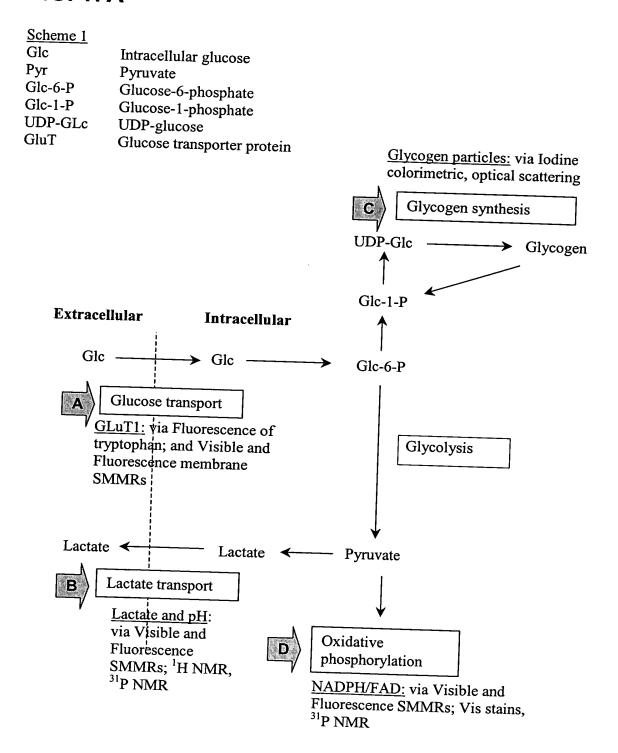
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FIG. 17A



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FIG. 17B

Scheme 2. Overview of metabolic pathways for glucose in epidermis

FIG. 17C

Scheme 3. Structure of generic pH sensitive dye for specific action as a lactate/H⁺ SMMR

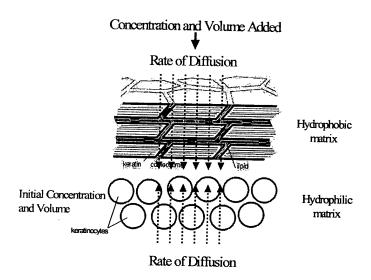
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Scheme 4. In Vivo Calibration Issues

FIG. 17D

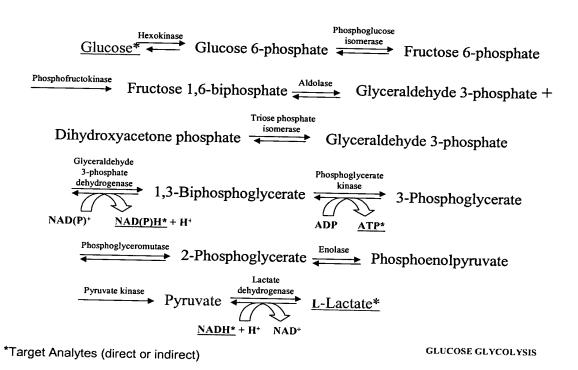


FIG. 18